

INTERNATIONAL SEARCH REPORT

Internat Application No
PCT/GB 03/01410

A. CLASSIFICATION OF SUBJECT MATTER
IPC 7 E21B19/07 E21B19/10

According to International Patent Classification (IPC) or to both national classification and IPC

B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)
IPC 7 E21B

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the international search (name of data base and, where practical, search terms used)

EPO-Internal

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	US 5 027 926 A (COX DON C) 2 July 1991 (1991-07-02) the whole document see slips (41), primary wedge (36), secondary wedge (40), spring (48), link (47), segments in fig. 3. Claim 10 lacks inventive step with regard to this document considered alone.	1-12
X	US 4 576 254 A (COX DON C) 18 March 1986 (1986-03-18) the whole document see slips (55), primary wedge (41), secondary wedge (51), link (51b), segments in fig. 2. Claim 10 lacks inventive step with regard to this document considered alone.	1-12
	-/-	

☒ Further documents are listed in the continuation of box C.

☒ Patent family members are listed in annex.

* Special categories of cited documents :

- *A* document defining the general state of the art which is not considered to be of particular relevance
- *E* earlier document but published on or after the international filing date
- *L* document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified)
- *O* document referring to an oral disclosure, use, exhibition or other means
- *P* document published prior to the international filing date but later than the priority date claimed

- *T* later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention
- *X* document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone
- *Y* document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art.
- *Z* document member of the same patent family

Date of the actual completion of the international search

30 July 2003

Date of mailing of the international search report

29/08/2003

Name and mailing address of the ISA

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C.(Continuation) DOCUMENTS CONSIDERED TO BE RELEVANT

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	US 6 089 338 A (BOULIGNY JR VERNON J) 18 July 2000 (2000-07-18) column 3, line 57 -column 5, line 27; figures 1-4 ---	1-3,11, 12
X	US 3 760 469 A (BROWN C) 25 September 1973 (1973-09-25) column 2, line 45 -column 3, line 36 column 7, line 13 -column 8, line 46; figures 1,2,7,8 -----	1-3,11, 12

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Box I Observations where certain claims were found unsearchable (Continuation of item 1 of first sheet)

This International Search Report has not been established in respect of certain claims under Article 17(2)(a) for the following reasons:

1. ☐ Claims Nos.:
because they relate to subject matter not required to be searched by this Authority, namely:

2. ☒ Claims Nos.: 13
because they relate to parts of the International Application that do not comply with the prescribed requirements to such an extent that no meaningful International Search can be carried out, specifically:
Claim relying entirely on the drawings in contrast with Rule 6.2(a)PCT

3. ☐ Claims Nos.:
because they are dependent claims and are not drafted in accordance with the second and third sentences of Rule 6.4(a).

Box II Observations where unity of invention is lacking (Continuation of item 2 of first sheet)

This International Searching Authority found multiple inventions in this International application, as follows:

1. ☐ As all required additional search fees were timely paid by the applicant, this International Search Report covers all searchable claims.

2. ☐ As all searchable claims could be searched without effort justifying an additional fee, this Authority did not invite payment of any additional fee.

3. ☐ As only some of the required additional search fees were timely paid by the applicant, this International Search Report covers only those claims for which fees were paid, specifically claims Nos.:

4. ☐ No required additional search fees were timely paid by the applicant. Consequently, this International Search Report is restricted to the invention first mentioned in the claims; it is covered by claims Nos.:

Remark on Protest

- ☐ The additional search fees were accompanied by the applicant's protest.
- ☐ No protest accompanied the payment of additional search fees.

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Patent document cited in search report	Publication date	Patent family member(s)	Publication date
US 5027926	A	02-07-1991	US 4940118 A 10-07-1990
		CA 2001606 A1 30-04-1990	
		DE 3935515 A1 03-05-1990	
		GB 2224295 A ,B 02-05-1990	
		NO 894035 A 02-05-1990	
US 4576254	A	18-03-1986	NONE
US 6089338	A	18-07-2000	NONE
US 3760469	A	25-09-1973	NONE